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Peter Bier

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EXAMINER

FEELY, MICHAEL J

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/673,906

**Applicant(s)**

BIER ET AL.

**Examiner**

Michael J. Feely

**Art Unit**

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Pending Claims***

Claims 1-28 are pending.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Independent claims 1 and 23 have been amended to include five specific embodiments for the silane used in the scratch-resistant layer. These include structural representations of silyl acrylates and cyclic organosiloxanes. These structures feature variables that are not defined in the claims.

In addition, applicant has included cyclic organosiloxanes in the genus of silane. A silane is typically a monomer or dimer molecule, while cyclic organosiloxanes are polymeric materials. Because of this, it is unclear how cyclic organosiloxanes properly fall within the genus of "silanes".

Furthermore, it is unclear what "VO" represents. Based on the amendment to claim 14, this should be VO<sup>3+</sup>. Even so, it is unclear how this falls under the genus of "an element".

4. The previous rejection of claims 8, 10-12, and 14 are rejected under 35 U.S.C. 112, second paragraph, has been overcome by amendment.

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***Claim Interpretation***

5. The scope of claim 1 comprises layers (1), (2), and (3), wherein layer (3) consists of (a) or (a) & (b) together. The following should be noted regarding layer 3:

- (A) When layer (3) consists of only (a), the scope of layer (3) overlaps the scope of layer (2) when M is Si. This overlapping scope includes two identical layers stacked on one another, essentially forming one single layer. In this instance, the recitation of a single layer or multiple layers that satisfy the limitations of both layers (2) and (3) would anticipate the claim.
- (B) When layer (3) consists of both (a) and (b), the scope of layer (3) overlaps the scope of layer (2). This overlapping scope includes two identical layers stacked on one another, essentially forming one single layer. In this instance, the recitation of a single layer that satisfies the limitations of both layers (2) and (3) would anticipate the claims.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The rejection of claims 1-3, 5, 13, 16, 18, and 22 under 35 U.S.C. 102(b) as being anticipated by Yoldas et al. (US Pat. No. 4,753,827) stands for the reasons of record.

**This rejection is based on interpretation (B) of claim 1.**

Regarding claims 1-3, 5, 13, 16, 18, and 22, Yoldas et al. disclose: (I) a multilayered article comprising:

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(1) a substrate (S) (Abstract; column 3, lines 42-52);

(2) a scratch resistant layer (SR) prepared by curing a scratch-resistant coating composition comprising a polycondensate prepared from at least one silane, said polycondensate being prepared by a sol-gel process wherein the at least one silane is selected from the group consisting of 1) methylsilane, 2) methyltrimethoxysilane, methyltrihydroxysilane and mixtures thereof, 3) silyl acrylates, 4) silyl acrylates comprising  $\text{AlO}(\text{OH})$  particles, and 5) cyclic organosiloxanes (column 2, line 33 through column 3, line 55); and

(3) a top layer (T) prepared by curing a top layer coating composition prepared by hydrolyzing a composition consisting of: (a) at least one compound  $\text{M}(\text{R}')_m$  (I) wherein M is an element selected from the group consisting of Si, Ti, Zr, Sn, Ce, Al, B, V, In and Zn,  $\text{R}'$  represents a hydrolysable radical, and m is an integer from 2 to 4; and (b) optionally at least one compound  $\text{R}_b\text{SiR}'_a$  (II) wherein the radicals  $\text{R}'$  and R are the same or different,  $\text{R}'$  is as defined for general formula (I), R represents a group selected from an alkyl group, an alkenyl group, an aryl group, a hydrocarbon group with at least one halogen group, an epoxide group, a glycidyloxy group, an amino group, a mercapto group, a methacryloxy group and a cyano group, and a and b independently of one another have a value from 1 to 3, provided that the sum of a and b is four (column 2, line 33 through column 3, line 55);

wherein said scratch-resistant layer is interposed between said substrate and said top layer (column 2, line 33 through column 3, line 55);

(2) wherein said substrate comprises a plastic (Abstract; column 3, lines 42-52);

(3) wherein the polycondensate of the scratch resistant coating composition is prepared from methyl-silane (column 2, lines 32-51);

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(5) wherein the polycondensate of the scratch-resistant coating composition is prepared from at least one silyl acrylate (column 2, lines 32-51);

(13) wherein M of formula (I) is selected from the group consisting of Si, Ti, Zr, Sn and Ce, and m is 4 (column 2, lines 60-67);

(16) wherein the hydrolysable radical R' of formulas (I) and (II) is selected from the group consisting of halogens, C<sub>1-4</sub> alkoxy, C<sub>6-10</sub> aryloxy, C<sub>1-4</sub> acyloxy and alkylcarbonyl (column 2, line 33 through column 3, line 55);

(18) wherein formula (II) is selected from at least one of glycidyoxy-propyl-tri-methoxy-silane, methyltriethoxysilane and methacryloxy-propyl-trimethoxysilane (column 2, lines 32-51; Examples); and

(22) further comprising a primer layer (P) interposed between said substrate and said scratch-resistant layer (column 4, lines 12-28).

8. The rejection of claims 1, 5, 12-14, 16, and 18-21 under 35 U.S.C. 102(b) as being anticipated by Aben et al. (US Pat. No. 5,742,119) stands for the reasons of record.

**This rejection is based on interpretation (B) of claim 1.**

Regarding claims 1, 5, 12-14, 16, and 18-21, Aben et al. disclose: (I) a multilayered article comprising:

(1) a substrate (S) (Abstract);

(2) a scratch resistant layer (SR) prepared by curing a scratch-resistant coating composition comprising a polycondensate prepared from at least one silane, said polycondensate being prepared by a sol-gel process wherein the at least one silane is selected from the group

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consisting of 1) methylsilane, 2) methyltrimethoxysilane, methyltrihydroxysilane and mixtures thereof, 3) silyl acrylates, 4) silyl acrylates comprising  $\text{AlO}(\text{OH})$  particles, and 5) cyclic organosiloxanes (column 3, line 51 through column 4, line 12; column 8, line 3 through column 9, line 45); and

(3) a top layer (T) prepared by curing a top layer coating composition prepared by hydrolyzing a composition consisting of: (a) at least one compound  $\text{M}(\text{R}')_m$  (I) wherein M is an element selected from the group consisting of Si, Ti, Zr, Sn, Ce, Al, B, Vo, In and Zn,  $\text{R}'$  represents a hydrolysable radical, and m is an integer from 2 to 4; and (b) optionally at least one compound  $\text{R}_b\text{SiR}'_a$  (II) wherein the radicals  $\text{R}'$  and R are the same or different,  $\text{R}'$  is as defined for general formula (I), R represents a group selected from an alkyl group, an alkenyl group, an aryl group, a hydrocarbon group with at least one halogen group, an epoxide group, a glycidyloxy group, an amino group, a mercapto group, a methacryloxy group and a cyano group, and a and b independently of one another have a value from 1 to 3, provided that the sum of a and b is four (column 3, line 51 through column 4, line 12; column 8, line 3 through column 9, line 45);

wherein said scratch-resistant layer is interposed between said substrate and said top layer (column 3, line 51 through column 4, line 12; column 8, line 3 through column 9, line 45);

(5) wherein the polycondensate of the scratch-resistant coating composition is prepared from at least one silyl acrylate (column 8, lines 18-58);

(12) wherein the hydrolysis of the composition of the top layer coating composition is conducted in the presence of a solvent selected from at least one of water, an alcohol having a boiling point below  $120^\circ\text{C}$  and an alkoxy-alcohol (column 9, lines 15-19);

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(13) wherein M of formula (I) is selected from the group consisting of Si, Ti, Zr, Sn and Ce, and m is 4 (column 8, lines 58-64);

(14) wherein M of formula (I) is selected from the group consisting of Al, B, V and In, and m is 3 (column 8, lines 58-64);

(16) wherein the hydrolysable radical R' of formulas (I) and (II) is selected from the group consisting of halogens, C<sub>1-4</sub> alkoxy, C<sub>6-10</sub> aryloxy, C<sub>1-4</sub> acyloxy and alkylcarbonyl (column 8, lines 17-64);

(18) wherein formula (II) is selected from at least one of glycidyoxy-propyl-trimethoxysilane, methyltriethoxysilane and methacryloxy-propyl-trimethoxysilane (column 8, lines 18-58);

(19) wherein after completion of the hydrolysis of the composition of the top layer coating composition a hydrolysis product is formed and, at least one of: (a) at least one additive selected from the group consisting of flow control agents, dyestuffs, stabilizers and inorganic fillers is added to the hydrolysis product; and (b) the concentration of the hydrolysis product is adjusted to 0.02 to 15 wt% by adding at least one of alcohols and alkoxy-alcohols to the hydrolysis product (column 9, lines 5-45; Examples);

(20) wherein the scratch-resistant layer has a thickness of 0.5 to 30 microns (column 3, lines 51-57); and

(21) wherein the top layer has a thickness of 0.1 to 3.0 microns (column 3, lines 51-57).

9. The rejection of claims 1, 8, 9, 12, 13, 16-19, 23, 24, and 28 (**based on interpretation (A) of claim 1**) under 35 U.S.C. 102(b) as being anticipated by Aben et al. (US Pat. No. 5,742,119) has been overcome by amendment.



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10. Claims 1-3, 5, 8, 12, 13, and 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al. (WO 01/03901). All citations are directed to the US equivalent patent (US Pat. No. 6,555,236).

**This rejection is based on interpretation (B) of claim 1.**

Regarding claims 1-3, 5, 8, 12, 13, and 16-21, Yoldas et al. disclose: (I) a multilayered article comprising:

- (1) a substrate (S) (Abstract; column 9, line 55 through column 10, line 32);
- (2) a scratch resistant layer (SR) prepared by curing a scratch-resistant coating composition comprising a polycondensate prepared from at least one silane, said polycondensate being prepared by a sol-gel process wherein the at least one silane is selected from the group consisting of 1) methylsilane, 2) methyltrimethoxysilane, methyltrihydroxysilane and mixtures thereof, 3) silyl acrylates, 4) silyl acrylates comprising  $\text{AlO}(\text{OH})$  particles, and 5) cyclic organosiloxanes (column 2, lines 17-63); and
- (3) a top layer (T) prepared by curing a top layer coating composition prepared by hydrolyzing a composition consisting of: (a) at least one compound  $\text{M}(\text{R}')_m$  (I) wherein M is an element selected from the group consisting of Si, Ti, Zr, Sn, Ce, Al, B, V, In and Zn,  $\text{R}'$  represents a hydrolysable radical, and m is an integer from 2 to 4; and (b) optionally at least one compound  $\text{R}_b\text{SiR}'_a$  (II) wherein the radicals  $\text{R}'$  and R are the same or different,  $\text{R}'$  is as defined for general formula (I), R represents a group selected from an alkyl group, an alkenyl group, an aryl group, a hydrocarbon group with at least one halogen group, an epoxide group, a glycidyloxy group, an amino group, a mercapto group, a methacryloxy group and a cyano group,

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and a and b independently of one another have a value from 1 to 3, provided that the sum of a and b is four (column 2, lines 17-63);

wherein said scratch-resistant layer is interposed between said substrate and said top layer (column 2, lines 17-63);

(2) wherein said substrate comprises a plastic (Abstract; column 9, line 55 through column 10, line 32);

(3) wherein the polycondensate of the scratch resistant coating composition is prepared from methyl-silane (column 3, line 47 through column 4, line 13);

(5) wherein the polycondensate of the scratch-resistant coating composition is prepared from at least one silyl acrylate (column 3, line 47 through column 4, line 13);

(8) wherein the hydrolysis of the composition of the top layer coating composition is conducted in the presence of at least 0.6 mole of water, based on 1 mole of hydrolysable radicals R' (column 6, line 62 through column 7, line 34);

(12) wherein the hydrolysis of the composition of the top layer coating composition is conducted in the presence of a solvent selected from at least one of water, and alcohol having a boiling point below 120 °C and an alkoxy-alcohol (column 6, lines 51-61)

(13) wherein M of formula (I) is selected from the group consisting of Si, Ti, Zr, Sn and Ce, and m is 4 (column 4, lines 14-25);

(16) wherein the hydrolysable radical R' of formulas (I) and (II) is selected from the group consisting of halogens, C<sub>1-4</sub> alkoxy, C<sub>6-10</sub> aryloxy, C<sub>1-4</sub> acyloxy and alkylcarbonyl (column 3, line 47 through column 4, line 25);

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(17) wherein formula (I) is selected from at least one tetraalkoxysilane (column 4, lines 14-25);

(18) wherein formula (II) is selected from at least one of glycidyoxy-propyl-tri-methoxy-silane, methyltriethoxysilane and methacryloxy-propyl-trimethoxysilane (column 3, line 47 through column 4, line 25);

(19) wherein after completion of the hydrolysis of the composition of the top layer coating composition a hydrolysis product is formed and, at least one of: at least one additive selected from the group consisting of flow control agents, dyestuffs, stabilizer and inorganic fillers is added to the hydrolysis product (column 7, lines 60-67);

(20) wherein the scratch resistant layer has a thickness of 0.5 to 30 microns (column 2, lines 18-24); and

(21) wherein the top layer has a thickness of 0.1 to 3.0 microns (column 2, lines 18-24).

***Claim Rejections - 35 USC § 103***

11. The rejection of claims 8, 10, 20, and 21 under 35 U.S.C. 103(a) as being unpatentable over Yoldas et al. (US Pat. No. 4,753,827) stands for the reasons of record.

Regarding claims 8 and 10, Yoldas et al. use water and acid to hydrolyze their system (*see Example*); however, they fail to explicitly disclose the water concentration and pH range set forth in the instant claims.

It should be noted that one of ordinary skill in the art would have recognized that a proper amount of water would have been inherently required for the hydrolysis/condensation reaction to take place. Furthermore, one of ordinary skill in the art would have recognized that the acid is

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used as a catalyst for this reaction system, and the pH is merely an indicator of the speed at which the controlled reaction is allowed to proceed.

In light of this, it has been found that, “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation,” – *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); and, “A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation,” – *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the claimed quantity of water and pH range in the reaction system of Yoldas et al. because both variables would have been recognized as result-effective variables that drive and control the reaction mechanism, resulting in optimum coating properties.

Regarding claims 20 and 21, Yoldas et al. fail to explicitly disclose a coating thickness. However, one of ordinary skill in the art would have recognized that a minimum thickness is required to obtain the desired anti-abrasion properties, while a maximum thickness is established to ensure structural integrity and cost-effectiveness of the coating.

In light of this, it has been found that, “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation,” – *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); and, “A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or

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workable ranges of said variable might be characterized as routine experimentation,” – *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the coating of Yoldas et al. in the combined amounts of instant claims 20 and 21 because the coating thickness would have been recognized as a result-effective variable that ensures adequate abrasion-resistance, structural integrity, and cost-effectiveness.

12. The rejection of claims 25 and 26 under 35 U.S.C. 103(a) as being unpatentable over Aben et al. (US Pat. No. 5,742,119) has been overcome by amendment.

13. The rejection of claim 10 under 35 U.S.C. 103(a) as being unpatentable over Aben et al. (US Pat. No. 5,742,119) stands for the reasons of record.

Regarding claim 10, Aben et al. use water and acid to hydrolyze their system (*see Example*); however, they fail to explicitly disclose the water concentration set forth in the instant claim.

It should be noted that one of ordinary skill in the art would have recognized that a proper amount of water would have been inherently required for the hydrolysis/condensation reaction to take place. Furthermore, one of ordinary skill in the art would have recognized that the acid is used as a catalyst for this reaction system, and the pH is merely an indicator of the speed at which the controlled reaction is allowed to proceed.

In light of this, it has been found that, “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation,” – *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955);

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and, “A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation,” – *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the claimed quantity of water and pH range in the reaction system of Aben et al. because both variables would have been recognized as result-effective variables that drive and control the reaction mechanism, resulting in optimum coating properties.

14. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (WO 01/03901). All citations are directed to the US equivalent patent (US Pat. No. 6,555,236).

Regarding claim 10, Nakamura et al. use water and acid to hydrolyze their system (*see column 6, line 62 through column 7, line 34*); however, they fail to explicitly disclose the water concentration set forth in the instant claim.

It should be noted that one of ordinary skill in the art would have recognized that a proper amount of water would have been inherently required for the hydrolysis/condensation reaction to take place. Furthermore, one of ordinary skill in the art would have recognized that the acid is used as a catalyst for this reaction system, and the pH is merely an indicator of the speed at which the controlled reaction is allowed to proceed.

In light of this, it has been found that, “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation,” – *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955);

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and, "A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation," – *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the claimed quantity of water and pH range in the reaction system of Nakamura et al. because both variables would have been recognized as result-effective variables that drive and control the reaction mechanism, resulting in optimum coating properties.

#### ***Allowable Subject Matter***

15. Claims 4, 6, 7, 9, 11, and 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

16. Claims 23-28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

#### ***Response to Arguments***


4. Applicant's arguments filed August 21, 2006 have been fully considered but they are not persuasive. Contrary to Applicant's remarks, the scope of the two layers can still overlap – *see Claim Interpretation above*. Although the top layer (3) is defined by closed transitional language, the scratch resistant-layer (2) is defined by open transitional language. The silane of layer (2) and compound (II) of layer 3 still substantially overlap, and layer (2) is open to other materials, such as compound (I) of layer (3).

*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael J. Feely  
Primary Examiner  
Art Unit 1712

November 11, 2006

**MICHAEL FEELY**  
**PRIMARY EXAMINER**